

We claim:

1. A targeting construct comprising:

- (a) a first polynucleotide sequence homologous to a stefin homolog gene;
- (b) a second polynucleotide sequence homologous to the stefin homolog gene;
- 5 and
- (c) a selectable marker.

2. The targeting construct of claim 1, wherein the targeting construct further comprises a screening marker.

3. A method of producing a targeting construct, the method comprising:

- 10 (a) providing a first polynucleotide sequence homologous to a stefin homolog gene;
- (b) providing a second polynucleotide sequence homologous to the stefin homolog gene;
- (c) providing a selectable marker; and
- 15 (d) inserting the first sequence, second sequence, and selectable marker into a vector, to produce the targeting construct.

4. A method of producing a targeting construct, the method comprising:

- 20 (a) providing a polynucleotide comprising a first sequence homologous to a first region of a stefin homolog gene and a second sequence homologous to a second region of a stefin homolog gene; and
- (b) inserting a positive selection marker between the first and second sequences to form the targeting construct.

5. A cell comprising a disruption in a stefin homolog gene.

6. The cell of claim 5, wherein the cell is a murine cell.

25 7. The cell of claim 6, wherein the murine cell is an embryonic stem cell.

8. A non-human transgenic animal comprising a disruption in a stefin homolog gene.

9. A cell derived from the non-human transgenic animal of claim 8.

10. A method of producing a transgenic mouse comprising a disruption in a stefin homolog gene, the method comprising:

- 30 (a) introducing the targeting construct of claim 1 into a cell;
- (b) introducing the cell into a blastocyst;

- (c) implanting the resulting blastocyst into a pseudopregnant mouse, wherein said pseudopregnant mouse gives birth to a chimeric mouse; and
- (d) breeding the chimeric mouse to produce the transgenic mouse.

11. A method of identifying an agent that modulates the expression of a stefin homolog,
5 the method comprising:

- (a) providing a non-human transgenic animal comprising a disruption in a stefin homolog gene;
- (b) administering an agent to the non-human transgenic animal; and
- (c) determining whether the expression of stefin homolog in the non-human
10 transgenic animal is modulated.

12. A method of identifying an agent that modulates the function of a stefin homolog, the method comprising:

- (a) providing a non-human transgenic animal comprising a disruption in a stefin homolog gene;
- (b) administering an agent to the non-human transgenic animal; and
15 (c) determining whether the function of the disrupted stefin homolog gene in the non-human transgenic animal is modulated.

13. A method of identifying an agent that modulates the expression of stefin homolog, the method comprising:

- (a) providing a cell comprising a disruption in a stefin homolog gene;
- (b) contacting the cell with an agent; and
20 (c) determining whether expression of the stefin homolog is modulated.

14. A method of identifying an agent that modulates the function of a stefin homolog gene, the method comprising:

- (a) providing a cell comprising a disruption in a stefin homolog gene;
- (b) contacting the cell with an agent; and
25 (c) determining whether the function of the stefin homolog gene is modulated.

15. The method of claim 13 or claim 14, wherein the cell is derived from the non-human transgenic animal of claim 8.

16. An agent identified by the method of claim 11, claim 12, claim 13, or claim 14.
17. A transgenic mouse comprising a homozygous disruption in a gene comprising SEQ ID NO:1, or a homolog thereof.
18. The transgenic mouse of claim 17, wherein the transgenic mouse exhibits increased
5 activity, relative to a wild-type mouse.
19. The transgenic mouse of claim 18, wherein the transgenic mouse is hyperactive.
20. The transgenic mouse of claim 18, wherein the increased activity is characterized by increased velocity of movement in an open-field test, relative to a wild-type mouse.
21. The transgenic mouse of claim 17, wherein the transgenic mouse exhibits decreased
10 propensity for despair or depression, relative to a wild-type mouse.
22. The transgenic mouse of claim 21, wherein the decreased propensity for despair or depression is characterized by decreased immobile time in a tail suspension test, relative to a wild-type mouse.
23. The transgenic mouse of claim 17, wherein the transgenic mouse exhibits a stimulus-
15 processing deficit relative to a wild-type mouse.
24. The transgenic mouse of claim 18, wherein the stimulus-processing deficit is characterized by decreased pre-pulse inhibition.
25. The transgenic mouse of claim 17, wherein the transgenic mouse exhibits schizophrenic behavior.
- 20 26. The transgenic mouse of claim 17, wherein the transgenic mouse exhibits a neuropsychological disorder.
27. Phenotypic data associated with the transgenic mouse of claim 17, wherein the phenotypic data is in a database.